

REMARKS

Claims 1, 3-6, and 8-11 are all the claims pending in the present application. Claim 11 is rejected under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter. Claims 1, 6, and 11 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Kempf (U.S. Patent Application Publication No. 2003/0211842). Claims 1-11 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johnson, Mobility Support in IPv6 (29 October 2002), in view of Roe, Authentication of Mobile IPv6 Binding Updates and Acknowledgements.

§ 101 Rejection - Claim 11

Claim 11 is rejected based on the reasons set forth on pages 2-3 of the present Office Action. Applicants believe that claim 11 satisfies 35 U.S.C. § 101.

If the Examiner maintains the rejection under 35 U.S.C. § 101, Applicants respectfully request that the Examiner contact the undersigned to further discuss this rejection.

§ 103(a) Rejections - (Johnson/Roe) Claims 1-11

Claims 1-11 are rejected are based on the reasons set forth on pages 5-13 of the present Office Action. Applicants traverse these rejections at least based on the following reasons.

With respect to claim 1, Applicants submit that the applied references do not disclose or suggest at least a router comprising, *inter alia*:

- a data storage unit, which stores data for generating an authentication key generation token; and
- a first interface, which receives and transmits a packet to a destination address stored in a header of the packet.

The Examiner acknowledges that Johnson does not disclose a router comprising the above identified elements, however the Examiner alleges that Roe makes up for the deficiencies of Johnson. To support this argument, the Examiner simply cites pages 11-12 of Roe (Section 3.2 on Optimizations). In the cited section, it is stated that the asymmetric cryptographic operations that the mobile carries out can be performed instead by a home agent, which corresponds to the router. In response, Applicants submit that even if, *arguendo*, Roe discloses that asymmetric cryptographic operations of a mobile device can be performed instead by a home agent, there is no teaching or suggestion of how said cryptographic operations would be implemented in a router. Claim 1 recites specific elements of a router and their corresponding operations which are nowhere disclosed or suggested in either Johnson or Roe. The Examiner is utilizing impermissible hindsight reasoning in concluding, based on the mere sentence in Roe, that combining Johnson and Roe would result in the specific claimed invention set forth in claim 1. For example, the Examiner simply assumes that the applied references disclose a router having a data storage unit which stores data for generating an authentication key generation token. However, there is no teaching of a router having said data storage unit and corresponding operation thereof. Since there is no teaching or suggestion, as would be understood by one of ordinary skill in the art, of the specific feature of claim 1 discussed above in either of the applied references, Applicants submit that claim 1 is patentably distinguishable over the applied references.

Applicants submit that dependent claims 3-5 are patentable at least by virtue of their dependency from independent claim 1.

Further, with respect to dependent claim 3, Applicants submit that neither of the applied references discloses or suggests at least, “a packet converter, which receives a packet output from the packet monitoring unit, and converts a source address of the packet from the foreign address of the mobile node to the home address of the mobile node and outputs the converted address, according to a control given by the controller,” as recited in claim 3. The Examiner cites page 84, Section 10.4.3 of Roe, as allegedly satisfying the above-quoted feature of claim 3. However, as the Examiner acknowledges, this section only indicates that a home agent, that is, a router, must verify that a source address in a tunnel IP header is the mobile node’s primary care-of address. There is no discussion of converting a source address of the packet from the foreign address of the mobile node to the home address. In other words, there is no discussion of what occurs in Roe after verification that a source address in a header is the mobile node’s primary care-of address. Therefore, the above quoted feature of claim 3 is clearly not taught or suggested by either of the applied references, including Roe.

With respect to dependent claim 4, Applicants submit that neither of the applied references discloses or suggests at least, “wherein the controller controls the packet converter, so that the packet converter passes the packet without converting the source address included in the packet, if the binding information does not exist in the data storage unit,” as recited in claim 4. The Examiner cites the same page number and section of Roe as set forth above with respect to claim 3, as allegedly satisfying the features of claim 4. The teachings of the cited section are set forth in the paragraph immediately above, and clearly there is no teaching or suggestion of determining whether binding information exists or not in a data storage unit. Therefore, in

absence of such a determining operation, clearly there is no teaching or suggestion of a packet converter passing the packet without converting the source address included in the packet if the binding information does not exist in the data storage unit.

With respect to independent claim 6, Applicants amend this claim, as indicated herein, and submit that claim 6 is patentable at least based on reasons similar to those set forth above with respect to claim 1.

Applicants submit that dependent claims 8-10 are patentable at least by virtue of their dependency from independent claim 6.

Further, with respect to claims 8 and 9, Applicants submit that these claims are patentable at least based on reasons similar to those set forth above with respect to claim 3 and 4, respectively.

Finally, with respect to claim 11, Applicants amend this claim, as indicated herein, and submit that this claim is patentable at least based on reasons similar to those set forth above with respect to claim 1.

Claims 2 and 7 are canceled as indicated herein without prejudice or disclaimer.

§ 102(e) Rejections (Kempf) - Claims 1, 6, and 11

With respect to claim 1, Applicant submits that Kempf does not disclose or suggest at least, “wherein if the packet received from the first interface is a binding update packet encoded using the authentication key generated by the mobile node according to the authentication key generation token, the packet monitoring unit outputs the binding update packet to the controller, and the controller extracts binding information, including a home address of the mobile node and

a foreign address of the mobile node provided in a foreign link area, from the binding update packet using the authentication key stored in the data storage unit, and stores the extracted binding information in the data storage unit,” as recited in amended claim 1. At least based on the foregoing, Applicants submit that Kempf does not anticipate claim 1.

Claims 6 and 11 are amended, as indicated herein. Applicant submits that Kempf does not disclose or suggest each and every feature of claims 6 and 11, including the features:

- (e) receiving a binding update packet authenticated using the authentication key, the authentication key generated by the mobile node according to the authentication key generation token; and
- (f) extracting and storing binding information comprising a home address of the mobile node and a foreign address of the mobile node provided in the foreign link area, from the binding update packet, using the authentication key,
wherein operations (a)-(d) are performed by a router.

At least based on the foregoing, Applicants submit that Kempf does not anticipate claims 6 and 11.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No.: 10/705,947

Attorney Docket No.: Q77842

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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23373
CUSTOMER NUMBER

Date: June 13, 2007